

**MEMORANDUM OF UNDERSTANDING
BETWEEN
[FORMULATOR COMPANY]
AND
U.S. ENVIRONMENTAL PROTECTION AGENCY
DESIGN FOR THE ENVIRONMENT PROGRAM**

1 Statement of Purpose

The purpose of this Memorandum of Understanding (“MOU”) is to set forth the basis, terms, and goals of the Design for the Environment (“DfE”) Program partnership between [Formulator Company] (“ ”) and the U.S. Environmental Protection Agency (“EPA”). The partnership is part of a DfE safer chemical use initiative for commercial formulators. The basic goal of the initiative is to seek and promote innovative chemical products, technologies, and practices that benefit human health and the environment.

A key purpose of the [company name]-EPA/DfE partnership is to recognize and encourage the environmentally preferable chemistry exemplified by [company name]’s [product name]. The partnership will strive to promote and continually advance the environmental, technological, and efficiency benefits of [product name].

This MOU describes in general terms how [company name] formulates [product name], the environmental and human health benefits of this product, and how [company name] and the EPA/DfE will work together to continually improve [product name]’s health and environmental profile and expand its use.

2 Statement of Context and Challenge

Each year, commercial formulators use billions of pounds of chemical ingredients to make a wide array of general purpose and specialized cleaning products; ultimately, through use the chemicals in these products enter the environment. The EPA is concerned about the effect these chemicals might have on environmental quality and on the health and safety of workers and the public, who may use or come in contact with cleaning products.

Cleaning product formulators can improve the environmental and health profile of their products by using ingredients that are inherently less toxic, less environmentally persistent, less bioaccumulative, and that degrade to substances with similar beneficial characteristics when compared to ingredients used in conventional formulations. Environmentally oriented reformulation coupled with energy efficiency, resource conservation, and sound management practices offer the components for measurable and sustainable improvement in cleaning products and programs.

Conventional cleaning formulations often rely on a number of ingredients whose environmental and human health profiles can be improved. For example, highly alkaline chemistry, commonly a base for institutional cleaners, is corrosive, posing a threat to health and the environment. Inorganic phosphates are algal nutrients that can lead to oxygen depletion in fresh water systems. Many solvents are problematic: butyl cellosolve, a type of glycol ether, may be very hazardous to humans, and d-limonene, a terpene, raises environmental concerns. Concentrated chlorine is highly caustic and volatile and may react with other compounds, posing a risk to workers, and if released to the environment, is toxic to aquatic organisms. Many quaternary ammonium compounds exhibit strong toxicity and persistence in the environment. Some surfactants, like the nonylphenol ethoxylates, biodegrade to compounds that are more aquatically toxic than the parent, persist in the environment, and may disrupt endocrine systems (responsible for metabolism, reproduction, and growth).

{Specific challenges, contexts, or motives for change should be discussed here.}

3 [Company name]'s Improved Cleaning Chemistry

[Company name] has developed an improved cleaning system for [name sector] based on the unique properties of its [product name] formulation. For [name user facilities], [product name] offers a number of health and environmental advantages over conventional formulations: {Example for a laundry detergent--} [it replaces a highly alkaline-base with neutral pH ingredients, eliminates chlorine bleach by

substituting organic peroxide, and uses a surfactant with linear alkyl hydrophobic components that biodegrade without harmful byproducts.]

{Example of additional description for a laundry detergent} [Elimination of chlorine means less deterioration of fabrics, less suspended solids in the wastewater effluent, and of course no harmful chlorine byproducts. Less fabric deterioration also means less lint, which may be a fire hazard in the dryer and harmful to laundry room workers when inhaled. Further, [product name] works at lower temperatures and with fewer wash cycles than conventional formulations, which saves water and energy. In addition to reducing suspended solids, [product name] lowers biological oxygen demand and chemical oxygen demand in effluent waters, which benefits sewer treatment.] (For more information on the attributes and benefits of [product name], see section 7.)

Note: EPA/DfE relies solely on [company name], its integrity and good faith, for information on the composition, ingredients, and attributes of [product name]. EPA/DfE has not independently identified the ingredients in the [product name] formula nor verified any of [company name]'s claims concerning the product's efficiencies or performance. EPA/DfE expresses its judgment and professional opinion only as to the environmental and human health characteristics of [product name]. [Company name]'s obligations under any federal, state, or local regulations governing the company or [product name] are in no way altered by its partnership with EPA/DfE.

4 [Company name]'s Commitment to Formulate for the Environment

As part of the [company name]-EPA/DfE partnership, [company name] agrees to formulate and produce its [product name] cleaner using ingredients with a more positive environmental profile. A generic description of [product name]'s ingredients and their attributes appears below and is intended to reflect the actual composition of [product name] at the time of this agreement.

In the interest of maintaining the non-confidential nature of the MOU, [company name] has sent to EPA, in a separate document, the specific and complete chemical composition for its [product name] product. [Company name] reserves the right, however, to change the ingredients provided that their environmental profile is equal to or better than the current formulation and that any substitution occurs in consultation with EPA.

[Company name] will make available to the EPA the composition of [product name] on an as-needed basis or whenever significant changes in formulation occur. EPA will

keep confidential all product formulas and other proprietary information that [company name] furnishes to the Agency.

The following is a non-confidential description of the ingredients in [product name] and their environmental and health characteristics, as available:

	<u>Component</u>	<u>Generic Description</u>
[Product name]	Surfactant	Readily biodegradable, linear carbon chain
	Builder	Does not cause eutrophication in fresh
water	Sequestrant	Biodegradable
	Solvent	Biodegradable, lower toxicity
	Bleach	Non-chlorine
	Fragrance	See sec. 5
	Conditioning Agent	Biodegradable
	Enzymes	Neutral pH, not bioavailable

Adoption and use of the formulation agreed to in this MOU does not preclude, nor should it impede, [company name] in its efforts to further improve the environmental profile of the [product name] formula. In fact, a main element of the [company name]-EPA/DfE partnership is to provide [company name] the opportunity to work with EPA chemists, environmental scientists, and other staff in investigating materials to further improve the environmental profile of its products.

5 Continuous Environmental Improvement

[Company name] will make continuous environmental improvement an important element of its research and development activities. EPA/DfE recognizes the many challenges companies face in reformulating their products. Changes in product formulation must be undertaken cautiously and in increments so as not to alter the important interactions among ingredients and ultimately performance and customer satisfaction.

In addition to the environmentally oriented formulation set forth in section 4, [company name] agrees to investigate the feasibility of making additional improvements in the environmental and health profile of [product name]. Specifically, [company name] will consider use of an alternative [fragrance] (or no fragrance use), as recommended by EPA/DfE. [Company name] will undertake this formulation review within ___ months from the date of signature of this MOU.

[Company name] agrees to explore, on a on-going basis, ways to further improve the environmental profile of its cleaning products. [Company name] may consult with EPA/DfE about other products for use in the [name sector] and, following Agency review and assessment, may request that one or more be added to this agreement. With EPA/DfE's approval, this MOU may be amended as set forth in Section 11.

[Company name] and EPA/DfE agree to discuss on a twice yearly basis the status of [company name]'s reformulation research and continuous improvement activities. [Company name] may, at any time, request consultation and technical assistance from EPA in determining which chemical ingredients possess more positive environmental characteristics.

6 Formulator Right to Know

Cleaning product formulators have a right to know the properties and potential risks--to their employees and communities--of the chemicals they use. Manufacturers of raw materials for cleaning products have a responsibility to ascertain and communicate the potential toxicity of their products, especially those made and sold in large quantities.

As part of its partnership with EPA, [company name] agrees to ask its raw material suppliers for test data on the chemicals they sell and that [company name] uses in its products. If the raw material suppliers do not have test data on their chemicals, [company name] shall encourage them to perform basic toxicity testing (a basic toxicity profile for cleaning chemical ingredients should include: acute and chronic toxicity, developmental and reproductive toxicity, mutagenicity, ecotoxicity, environmental fate, and endocrine disruption).

[Company name] will share with EPA any chemistry or toxicity information on its ingredients obtained from its suppliers. Based on this information, [company name] will consider revisions to its product materials and warning statements, as appropriate.

7 User Benefits

[Company name]'s [product name] offers users the following set of benefits:

{Example for wall and floor cleaner}

Environmental Protection

[Product name] contains biodegradable raw materials and neutral-pH components. Its ingredients have a positive environmental profile—e.g., no chlorine bleach, ammonia, or harsh solvents—and biodegrade to compounds with similar characteristics.

Worker Safety

A neutral pH chemistry, non-use of chlorine bleach, ammonia, or harsh solvents, and mild wash water afford kitchen maintenance personnel a safer work environment. By replacing bleach and ammonia, mixtures of which may produce a toxic gas, [product name] removes a potential source of chemical poisoning.

Energy and Resource Conservation

Unlike typical institutional cleaners that require near-boiling temperatures, [product name] works in cold or tepid water, thereby saving energy. Further, because it contains no caustic or abrasive ingredients, [product name] is gentle on kitchen equipment and furniture and will not deteriorate the grout on tile floors, thus extending floor life.

Customer Education

[Company name] acts as a product steward by sponsoring customer training sessions with information on environmental and worker safety matters. [Company name] also trains its sales force on the benefits of formulations with improved environmental and health characteristics.

[Company name] agrees to inform [product name] customers about the [company name]-EPA/DfE partnership and their role in helping to protect health and the environment. [Company name] will make available to its customers an EPA contact to whom questions or comments on the partnership may be directed.

8 EPA Recognition and Support

[Company name] may use the Design for the Environment logo, DfE Industrial/Institutional Laundry Initiative logo (but not the official U.S. EPA logo), or any EPA statement of recognition or support on [product name] or [product name]-related information or advertising provided that EPA has had an opportunity to review and comment on the intended use. [Company name] may only use a DfE logo or EPA recognition for a DfE-recognized product and not on any general [company name] materials, non-DfE recognized products or literature, or non-[product name] advertising.

[Company name] will make available to EPA for review and comment any materials,

including [product name] promotional letters and advertisements, that [company name] develops in connection with the EPA/DfE-[company name] partnership, and especially information that describes or characterizes the DfE Formulator Initiative or EPA's position on issues related to the [name sector]. [Company name] may request EPA assistance in reviewing and editing materials about [product name] and the partnership.

[Company name] may extend EPA/DfE recognition to [product name] customers. To help in this process, DfE will provide [company name] with a customer recognition letter and prototype certificate of recognition.

[Company name] must discontinue use of any Agency logo or other form of recognition, within 30 days, under the following circumstances: if [company name] stops formulating [product name] using ingredients with a more positive environmental profile; upon the termination of this MOU; or, if so notified by EPA.

EPA may disseminate non-confidential information about the partnership in various media, including fact sheets, presentations, and web site. EPA may issue a press release containing general information about the partnership and MOU.

9 Measures of Success

[Company name] will provide to EPA, on a confidential basis, projected and actual market growth information for [product name], including numbers of new customers. [Company name] will make reasonable attempts to monitor the [name sector] market and make available to the Agency information on the impact of [company name]'s [product name]. [Company name] will provide periodic updates to the EPA on customer acceptance of and satisfaction with the reformulated product.

At EPA's request, [company name] will make available to the Agency, on a confidential basis, formulation bills of materials that confirm that [product name] contains the ingredients agreed to in this MOU, or has been modified as provided by the MOU. On an annual basis, [company name] will also provide EPA with its best estimate of the amounts of conventional ingredients, by component class (for example, surfactant, solvent, etc.), replaced by the partnership product.

As discussed in section 5, [company name] will provide periodic updates to EPA on the continuous improvement component of its research and development activities and on its efforts to improve the environmental profile of [product name]'s ingredients. [Company name] will also share the results of any product performance testing.

10 Confidentiality

EPA agrees to withhold from public disclosure and otherwise keep confidential all information claimed by [company name] as confidential business information in matters relating to this Design for the Environment partnership and MOU.

EPA/DfE will only use the information provided by [company name] for purposes related to the [company name]-EPA partnership/MOU and will disclose the information only to EPA employees and EPA contractors cleared for confidential information with a specific need to know. At the termination of the partnership/MOU, EPA/DfE will either return or destroy all [company name] confidential information in the Agency's possession.

[Company name] will maintain a copy of all confidential materials related to the [company name]-EPA/DfE partnership as records for the life of the partnership. On an as-needed basis, [company name] will provide the Agency copies of partnership records, including sanitized versions suitable for public disclosure.

11 Amendments to the MOU

As discussed in the Continuous Environmental Improvement section of this MOU, [company name] may request that EPA/DfE add other products to this agreement. If EPA agrees to the addition, [company name] may amend this MOU by submitting a letter that contains the essential elements from sections 3, 4, 5 and 7 of the current MOU. [Company name] and EPA/DfE will collaborate in developing the specific language for the amendment, which must be signed by an appropriate [company name] official. All other provisions of this MOU shall be incorporated by reference.

12 Termination of the MOU

If either [company name] or EPA has reason to believe that the other is not fulfilling the terms of the MOU, either party may take the following actions: provide written notification to the other stating a basis for the concern and providing a reasonable time to respond or remedy the situation. [Company name] and EPA should make reasonable efforts to resolve the issues to their mutual satisfaction. At its discretion, either party may upon written notification terminate the MOU and its commitments will cease without further obligation.

In any event, the terms and obligations in this MOU will cease three years from the

date of signature unless the parties renegotiate and renew a partnership agreement prior to the expiration date.

We agree to these terms and provisions:

For [company name]

For the U.S. Environmental
Protection Agency

[Company official]
[Title]

William H. Sanders, III
Director, Office of Pollution
Prevention and Toxics

Date _____

Date _____